

Instructions for proposers of 6U and 12U CubeSats for delivery to cislunar space

1) For proposers of 6U and 12U CubeSats for delivery to cislunar space on SLS EM-2:

- a) Proposers should consult the SLS Mission Planners Guide for general information about SLS: e.g. Figure 4-5 gives representative Secondary Payload Jettison “Bus Stops”.
- b) The SLS EM-2 6&12U Accommodations document gives requirements for CubeSats on SLS EM-2. These requirements should be followed unless a waiver has been obtained, except that the upper mass limit for 12U CubeSats is set at 24kg for the purpose of this AO. The process to request waivers is in development.
- c) Proposers should follow SLS-RQMT-216 (Exploration Mission-1 Safety Requirements for Secondary Payload Hardware REVISION B) until safety documents for SLS EM-2 are available.

2) For proposers of 6U and 12U CubeSats for delivery to cislunar space via Commercial Lunar Payload Services (CLPS):

The option for payload delivery to cislunar space or lunar orbit aboard a CLPS vehicle is an intended future capability; as such, detailed interface information for 6U or 12U in-flight deliveries is not yet available. Payload User Guides will be posted in the Program Library as they become available. **Respondents should follow the requirements for delivery on SLS EM-2, which are generally expected to envelop the constraints and environments of CLPS delivery, with the following exceptions:**

- 1) Most launch vehicles (LV) are expected to subject payloads to larger accelerations than specified in the SLS EM-2 6&12U Accommodations document. The General Environmental Verification Standard (GEVS = GSFC-STD-7000A) and SMC-S-016 should be used to derive testing requirements. While GSFC-STD-7000A and SMC-S-016 are useful references when defining testing environments and requirements, the test levels defined there are not guaranteed to encompass or satisfy all LV testing environments, and proposers should maintain additional margin to cover this uncertainty. Test requirements and levels that are not generated by the launch provider or the Mission Integrator are considered unofficial.
- 2) Assume no use of pyrotechnic devices. (To Be Reviewed)
- 3) Assume that a CLPS vehicle can deliver a payload to lunar orbit.

For maximum flight opportunity, proposed payloads should be compatible with both the SLS EM-2 requirements and those of CLPS.

NASA will perform an accommodation study of selectable proposals after the evaluation, but prior to the selection decision, to assess the extent to which the proposed investigation is compatible with the expected opportunities. For rideshares to cislunar space, a similar accommodation study will be conducted after review of the Phase A study and prior to the downselection decision. Selection or downselection will be informed by the likely availability of suitable rides.

This document may be updated periodically, but no later than 30 days before the proposal due date. It is each proposer's responsibility to check for updates.

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Program Library documents:

SLS Mission Planners Guide
SLS EM-2 6&12U Accommodations
SLS-RQMT-216

GSFC-STD-7000A (GEVS)
SMC-S-016
Astrobotic - Payload User Guide v3 2018-10
Masten Lunar Delivery Service Payload Users Guide Rev 1.0 2019.2.4